

OPERATING SUMMARY

TOWN OF  
**TRENTON**

WATER POLLUTION CONTROL PLANT

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TRENTON  
WATER POLLUTION CONTROL PLANT

operated for

THE TOWN OF TRENTON

by the

MINISTRY OF THE ENVIRONMENT

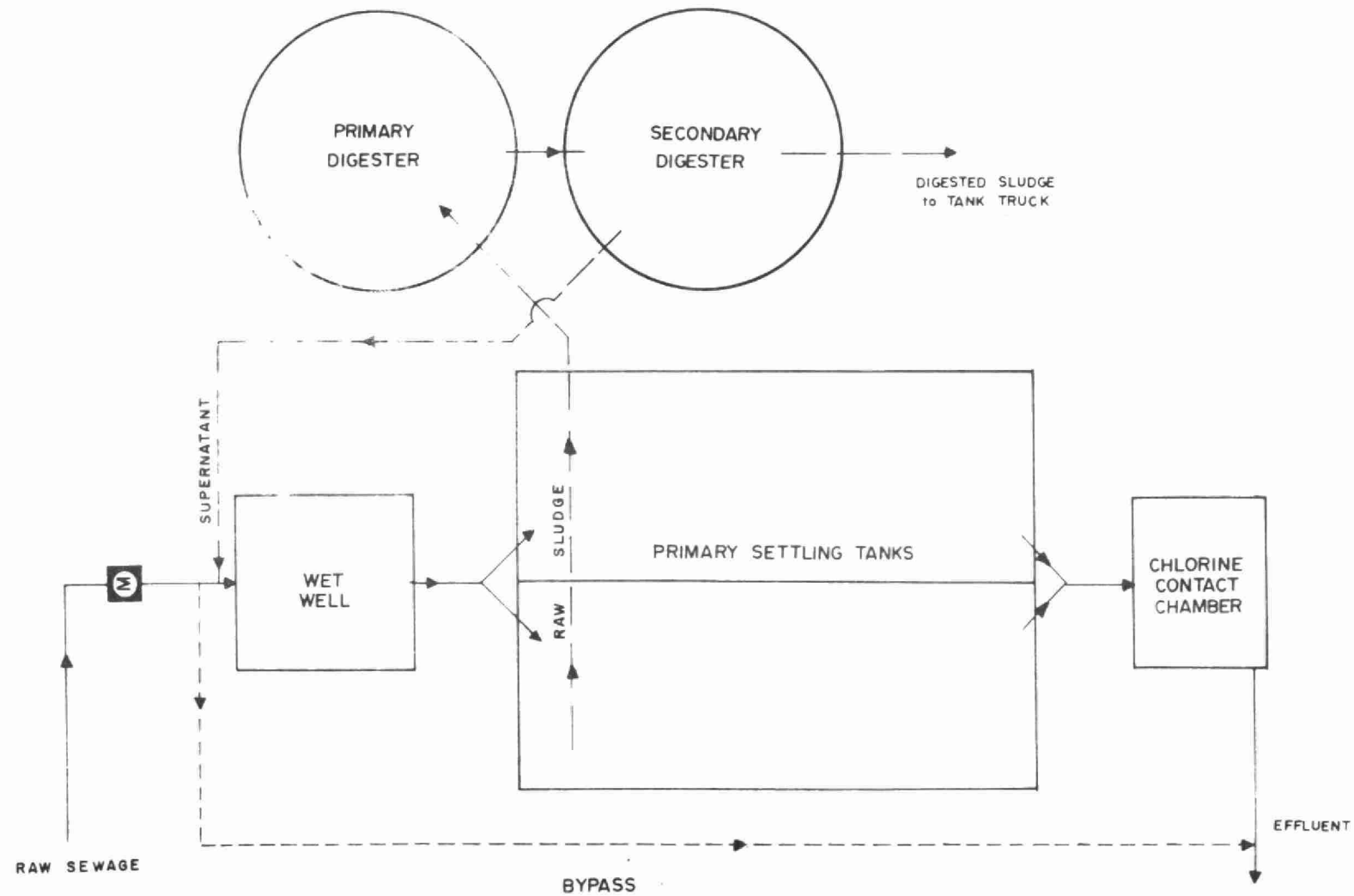
1974 ANNUAL OPERATING SUMMARY

prepared by  
Plant Performance Unit  
TECHNICAL SERVICES BRANCH  
T. Cross, Director

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# TOWN OF TRENTON WPCP



## DESIGN DATA

PROJECT Town of Trenton WPCP

TREATMENT Primary

DESIGN FLOW 1.0 mgd

DESIGN POPULATION 12,000

BOD - Raw Sewage 250 mg/l  
- Removal 35%

SS - Raw Sewage 200 mg/l  
- Removal 55%

### PRIMARY TREATMENT

#### Grit Removal

Type: Aerated, with air lift  
Size: One 10' x 9' x 8½' (4,775 gal)  
Retention: 1.5 min

#### Primary Sedimentation

Type: Jeffrey  
Size: Two 52' x 16' x 12' (125,000 gal)  
Retention: 3.0 hr  
Loading: Surface, 600 gal/ft<sup>2</sup>/day  
Weir, 8340 gal/ft/day

#### Air Supply

Two Roots-Connersville

### CHLORINATION

Type: F & P

#### Chlorine Contact Chamber

- not provided; chlorination in outfall

### OUTFALL

- 850 ft of 30" concrete pipe to Bay of Quinte

### SLUDGE HANDLING

#### Digestion System - Two-stage

##### Primary --

Type: Gas mixed, fixed cover; PFT  
Size: One 28' dia x 23' (13,500 cu ft or 84,000 gal)  
Loading: 2.62 lb/cu ft/mo

##### Secondary --

Type: Fixed cover  
Size: One 28' dia x 23' (13,500 cu ft or 84,000 gal)  
Total Loading: 1.31 lb/cu ft/mo

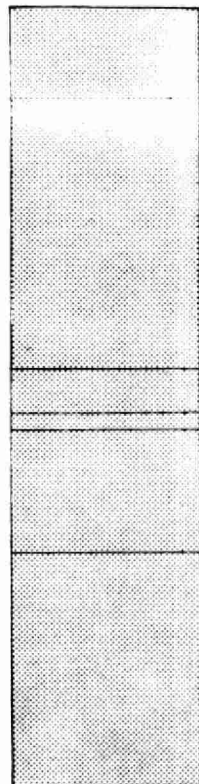
### PUMPING STATIONS

#### Dundas Street Pumping Station

Type: Fairbanks-Morse  
Size: One 700 gpm @ 39' tdh  
One 1740 gpm @ 48' tdh  
One 3130 gpm @ 68' tdh (diesel)

# ANNUAL COSTS

## 1974 OPERATING COSTS



- SALARIES & WAGES
- EMPLOYEE BENEFITS
- TRANSPORTATION & COMMUNICATIONS
- SERVICES
- SUPPLIES & EQUIPMENT
- AQUISITION/CONSTRUCTION OF PHYSICAL ASSETS
- TRANSFER PAYMENTS
- OTHER TRANSACTIONS

%

45

6

2

16

31

## YEARLY OPERATING COSTS

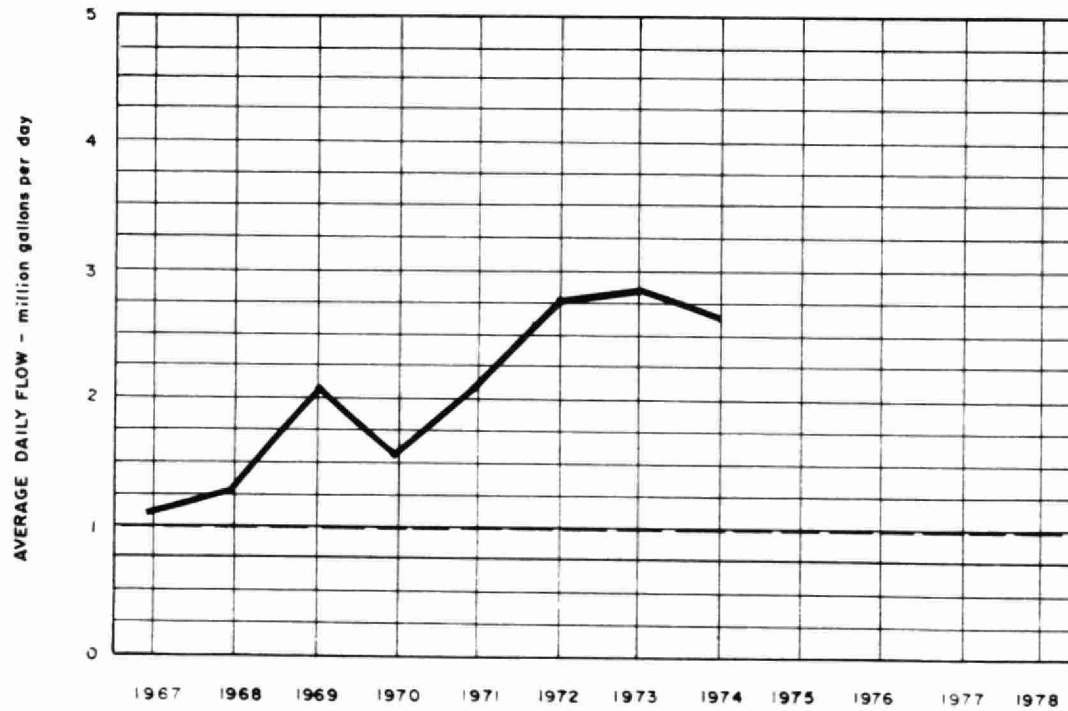
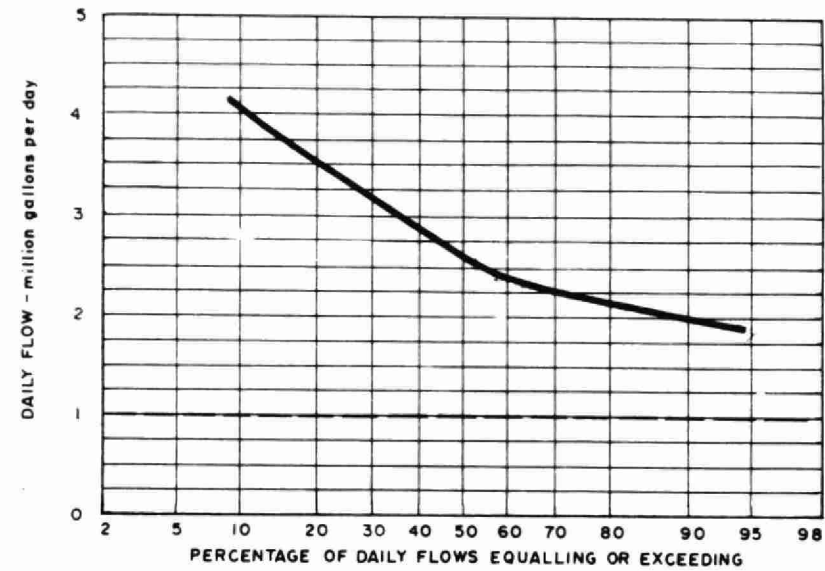
YEAR	SEWAGE TREATED in million gallons	TOTAL OPERATING COSTS	UNIT COSTS	
			\$/M G	¢/lb BOD
1969	402	28,799	37	5
1970	607 *	40,728	66	8
1971	780 *	41,695	53	5
1972	1005	49,135	49	9
1973	1017	50,313	49	6
1974	960	74,059	77	9

# OPERATING EXPENDITURES

Regular Staff	\$ 31,589	\$
Casual (Unclassified) Staff	1,373	
TOTAL SALARIES AND WAGES		32,962
TOTAL EMPLOYEE BENEFITS		4,744
TOTAL TRANSPORTATION AND COMMUNICATIONS		1,555
Insurance	1,344	
Sludge Haulage	9,078	
Repairs and Maintenance	1,107	
Other Services	160	
TOTAL SERVICES		11,689
Machinery and Equipment	3,968	
Chemicals	6,391	
Utilities	8,424	
Other Supplies and Equipment	4,326	
TOTAL SUPPLIES AND EQUIPMENT		23,109
TOTAL AQUISITION/CONSTRUCTION OF PHYSICAL ASSETS		
TOTAL TRANSFER PAYMENTS		
OTHER TRANSACTIONS		
GRAND TOTAL	GRAND TOTAL	\$ 74,059



# PROCESS DATA FLOWS

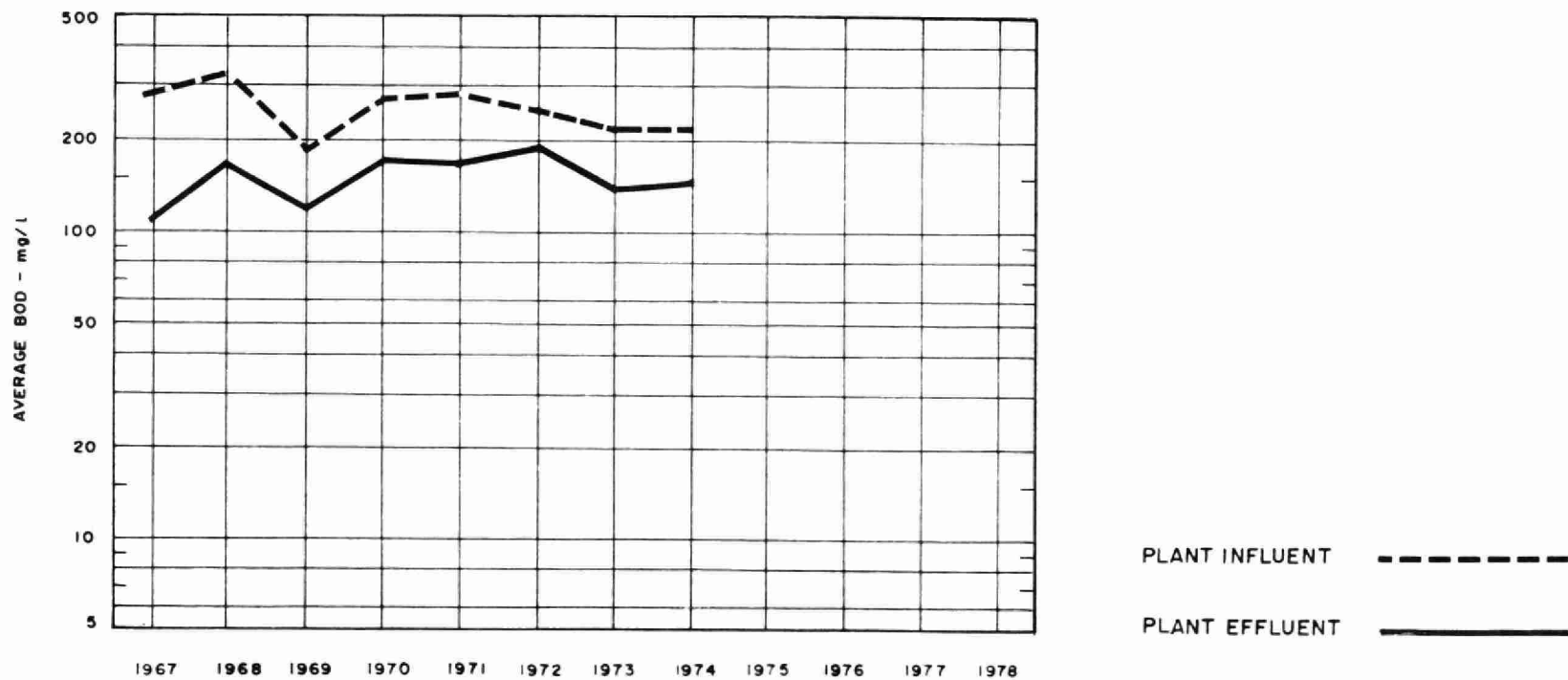
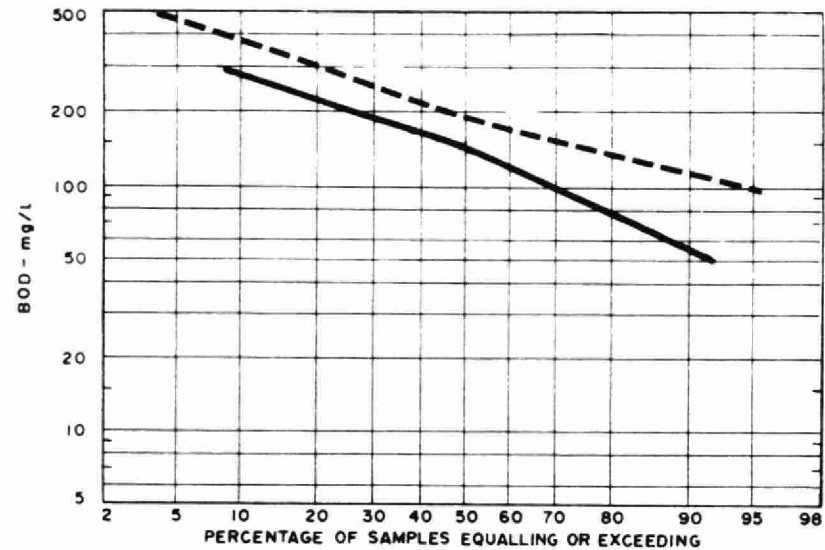


DESIGN CAPACITY — — — — —

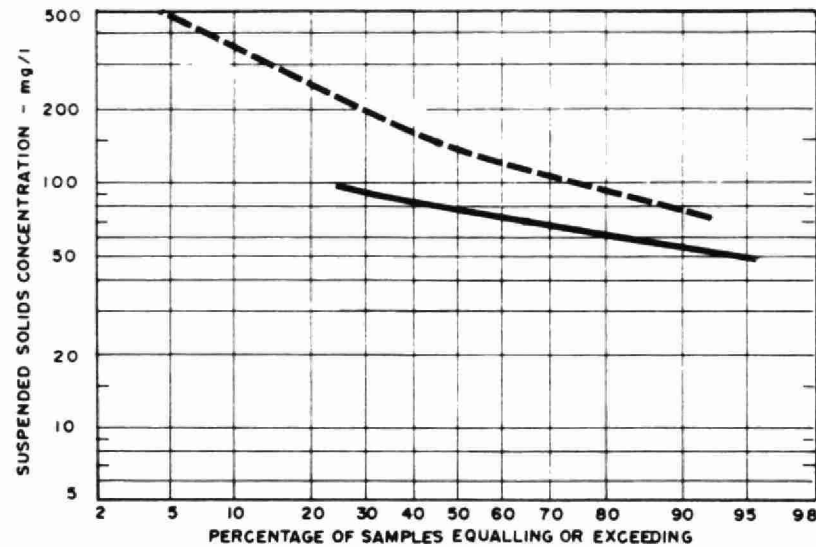
## PLANT PERFORMANCE

MONTH	FLOWS			BIOCHEMICAL OXYGEN DEMAND				SUSPENDED SOLIDS				PHOSPHORUS	
	TOTAL FLOW million gallons	AVERAGE DAY mil. gal	MAXIMUM DAY mgd	INFLUENT mg/l	EFFLUENT mg/l	REDUCTION		INFLUENT mg/l	EFFLUENT mg/l	REDUCTION		INFLUENT mg/l P	EFFLUENT mg/l P
						%	10 <sup>3</sup> pounds			%	10 <sup>3</sup> pounds		
JAN	89.31	2.88	3.97	155	180	0	0	115	90	22	22	4.0	3.3
FEB	72.43	2.59	3.66	425	290	32	98	145	115	21	22	6.0	5.2
MAR	87.73	2.83	4.00	198	202	0	0	120	80	33	35	4.4	3.7
APR	95.26	3.18	4.30	250	170	32	76	95	65	32	29	3.5	3.2
MAY	112.98	3.64	4.25										2.7
JUNE	82.41	2.75	3.67	228	179	21	40	148	88	41	49	3.4	3.1
JULY	70.35	2.27	3.12	282	76	73	144	875	115	87	535	5.7	2.7
AUG	70.05	2.26	2.93	163	65	60	69	188	88	53	70	5.5	4.0
SEPT	67.01	2.17	2.90	360	260	28	67	175	80	54	64	4.7	3.2
OCT	68.35	2.20	2.96	126	94	54	22	140	70	50	48	3.4	2.7
NOV	70.19	2.34	3.02	150	60	60	63	200	50	75	105	3.9	3.2
DEC	74.40	2.40	3.25					205	75	63	97	3.2	2.6
TOTAL	960.47	-	-	-	-	-		-	-	-		-	-
AVG.		2.63	MAXIMUM 4.30	234	148	37	69	263	88	67	140	4.6	3.3
No. of Samples	-	-	-	24	24	-	-	26	26	-	-	25	26

# BIOCHEMICAL OXYGEN DEMAND

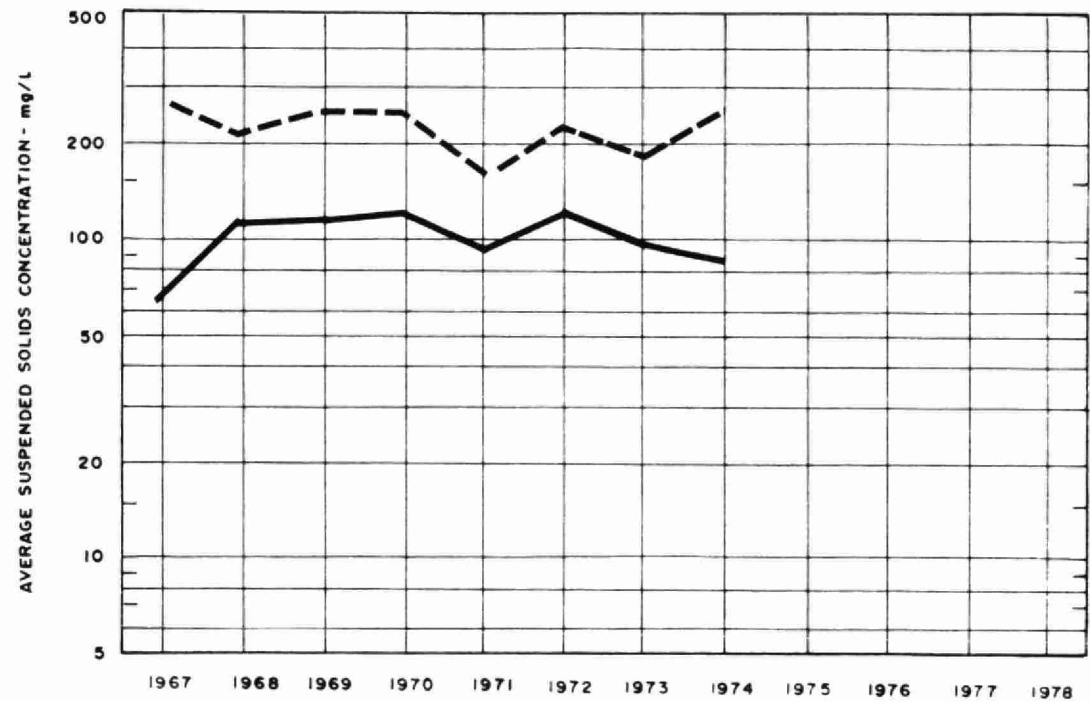


# SUSPENDED SOLIDS

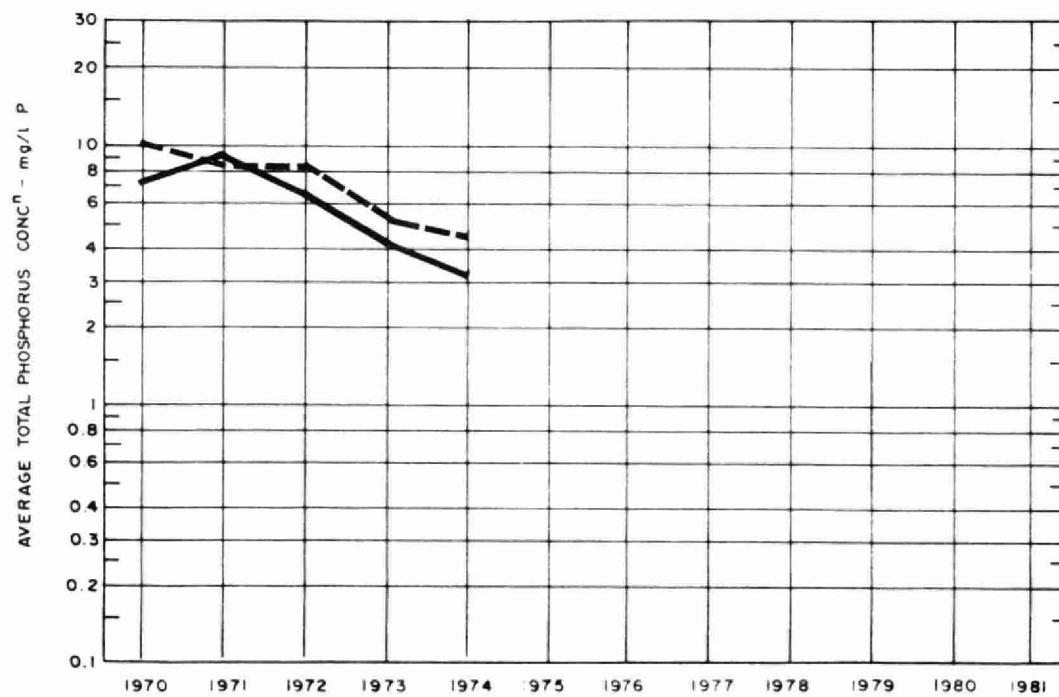
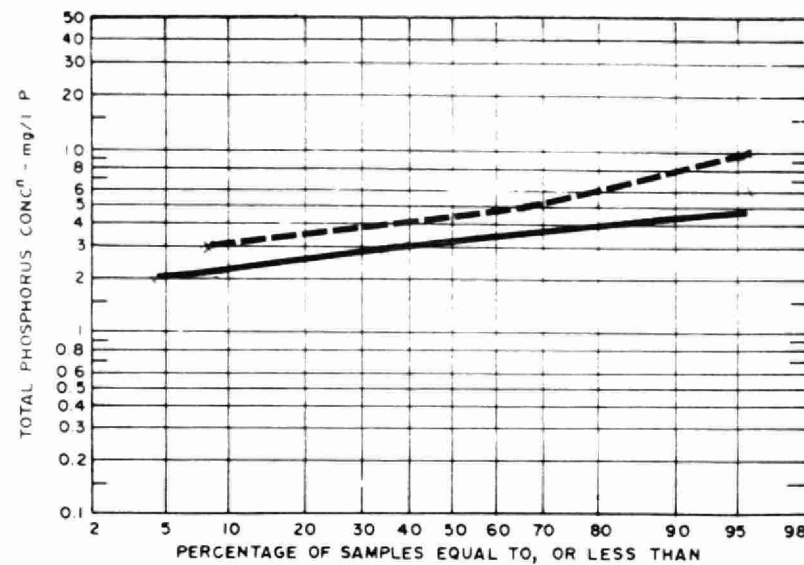


PLANT INFLUENT      - - - - -

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# PHOSPHORUS

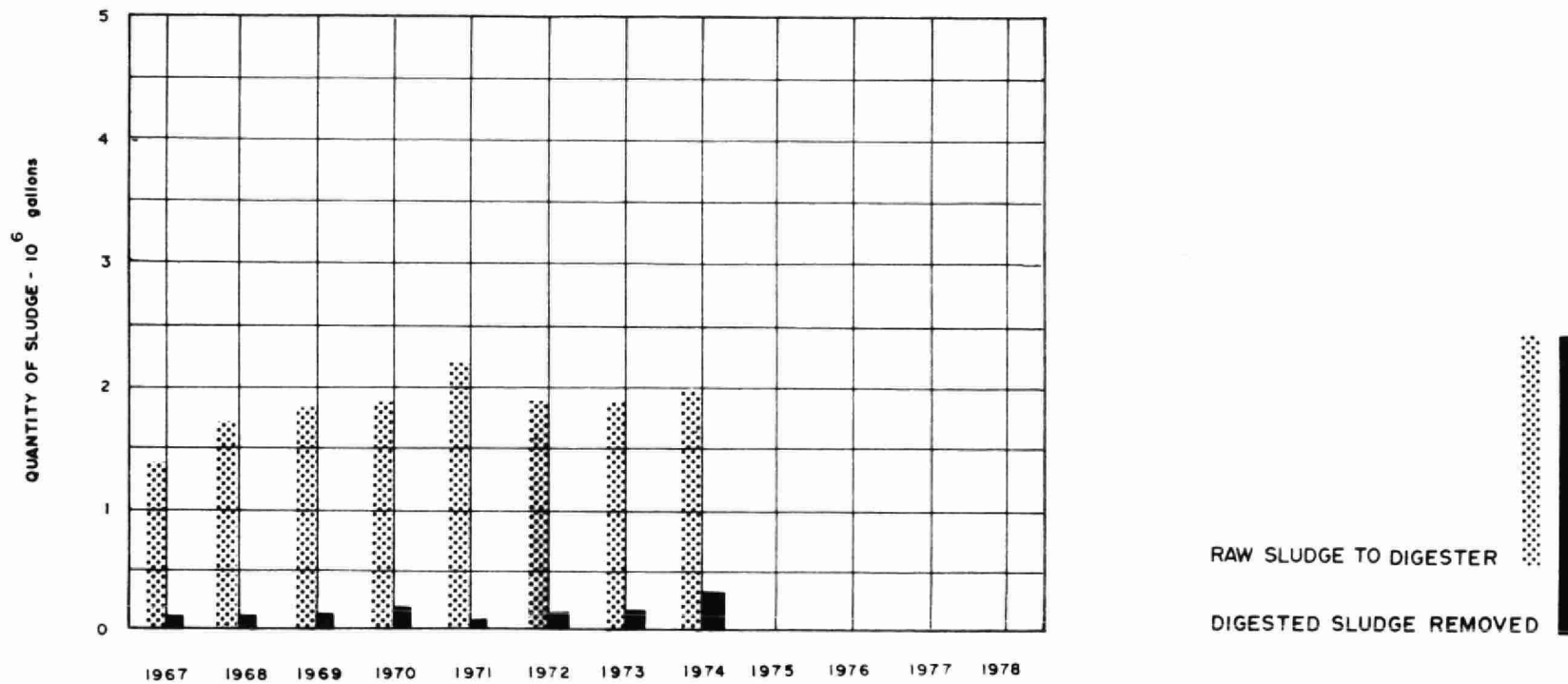
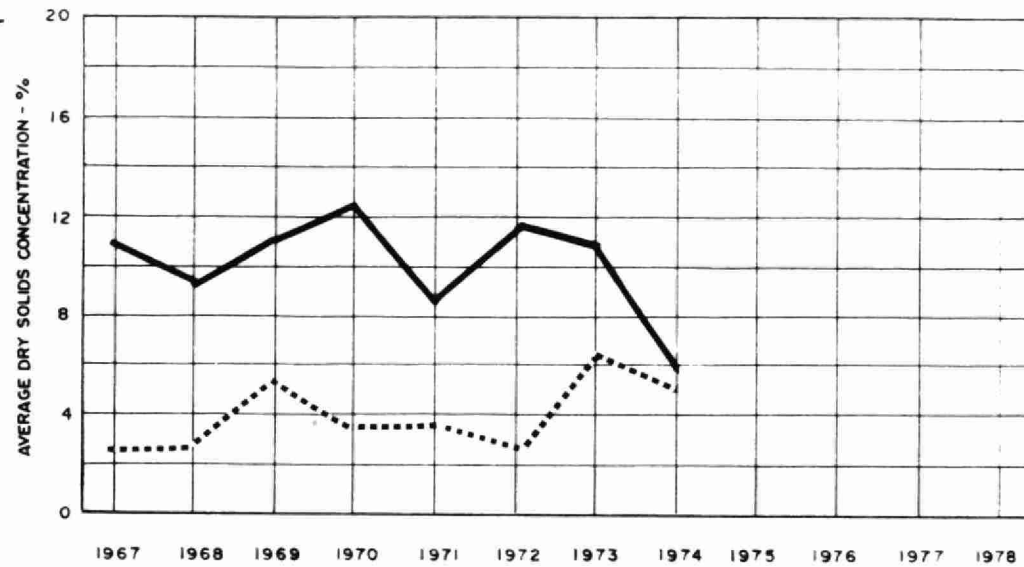


PLANT INFLUENT - - - - -

PLANT EFFLUENT —————

# DIGESTION

RAW SLUDGE .....  
DIGESTED SLUDGE ———



## TREATMENT DATA

	GRIT	CHLORINATION		SLUDGE DIGESTION and DISPOSAL							
MONTH	QUANTITY REMOVED cubic feet	CHLORINE USED 10 <sup>3</sup> pounds	AVERAGE DOSAGE mg/l	RAW SLUDGE			DIGESTED SLUDGE			SUPERNATANT	SLUDGE HAULED cubic yards
				QUANTITY 10 <sup>3</sup> gallons	TOTAL SOLIDS %	VOLATILE SOLIDS %	QUANTITY REMOVED 10 <sup>3</sup> gallons	TOTAL SOLIDS %	VOLATILE SOLIDS %	TOTAL SOLIDS %	
JAN	66	2.8	3.1	146.3	.7		0	1.3		0.8	396
FEB	60	2.2	3.1	125.2	10.9		18.2	9.1			216
MAR	70	2.3	2.7	186.0	6.3		34.3	6.9		2.7	204
APR	60	2.0	2.1	180.0	4.8		8.1	8.2		2.8	48
MAY	0	2.0	1.8	186.0			6.1				36
JUNE	70	2.3	2.8	171.1	4.1		54.0	9.5			320
JULY	8	2.1	3.0	154.9	4.2		33.7	4.4			799
AUG	0	1.8	2.6	177.1	3.4		37.7				248
SEPT	70	2.1	3.1	174.0	4.3		27.0	4.7			160
OCT	0	2.4	3.5	178.0			54.0	4.3			320
NOV	0	2.8	4.1	178.0			27.0				160
DEC	0	2.5	2.6	142.0	8.0		37.8	4.9			224
TOTAL	404	27.3	—	1998.6	—	—	337.9	—	—	—	3131
AVG.	0.4 cubic feet/mil gal	2.3	2.9	166.6	5.2			5.9		2.1	261

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